Complete Summary

GUIDELINE TITLE

Arrhythmia.

BIBLIOGRAPHIC SOURCE(S)

Arrhythmia. Philadelphia (PA): Intracorp; 2004. Various p.

GUIDELINE STATUS

This is the current release of the guideline.

All Intracorp guidelines are reviewed annually and updated as necessary, but no less frequently than every 2 years. This guideline is effective from January 1, 2004 to January 1, 2006.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Arrhythmia, including

- Sinus node arrhythmias (sinus bradycardia and sinus tachycardia)
- Atrial arrhythmia (premature atrial contractions, paroxysmal atrial tachycardia, atrial flutter, and atrial fibrillation)
- Ventricular arrhythmias (premature ventricular contractions, ventricular bigeminy, ventricular tachycardia, and ventricular fibrillation)
- Conduction abnormalities (first-degree atrioventricular [AV] block, second-degree AV block, third-degree AV block, and ventricular asystole)

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

CLINICAL SPECIALTY

Cardiology
Emergency Medicine
Family Practice
Internal Medicine
Thoracic Surgery

INTENDED USERS

Allied Health Personnel
Health Care Providers
Health Plans
Hospitals
Managed Care Organizations
Utilization Management

GUIDELINE OBJECTIVE(S)

To present recommendations for the diagnosis, treatment, and management of arrhythmia that will assist medical management leaders to make appropriate benefit coverage determinations

TARGET POPULATION

Individuals with arrhythmia

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Evaluation

1. Physical examination, history, and assessment of signs and symptoms
2. Diagnostic tests
    - Electrocardiogram (ECG)
    - Holter monitoring (for a predetermined length of time or with a treadmill exercise test)
    - Electrophysiological studies
    - Laboratory studies (serum potassium, calcium, and magnesium levels, digoxin level, blood glucose)

Treatment/Management

3. Anti-arrhythmic agents
4. Cardioversion
5. Defibrillation
6. Radio frequency catheter ablation

7. Implantable cardiac defibrillator
8. Permanent or temporary cardiac pacemakers

MAJOR OUTCOMES CONSIDERED

Efficacy of treatment

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Searches were performed of the following resources: reviews by independent medical technology assessment vendors (such as the Cochrane Library, HAYES); PubMed; MD Consult; the Centers for Disease Control and Prevention (CDC); the U.S. Food and Drug Administration (FDA); professional society position statements and recommended guidelines; peer reviewed medical and technology publications and journals; medical journals by specialty; National Library of Medicine; Agency for Healthcare Research and Quality; Centers for Medicare and Medicaid Services; and Federal and State Jurisdictional mandates.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Not Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not stated

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus (Delphi)

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

A draft Clinical Resource Tool (CRT or guideline) is prepared by a primary researcher and presented to the Medical Technology Assessment Committee or the Intracorp Guideline Quality Committee, dependent upon guideline product type.

The Medical Technology Assessment Committee is the governing body for the assessment of emerging and evolving technology. This Committee is comprised of a Medical Technology Assessment Medical Director, the Benefit and Coverage Medical Director, CIGNA Pharmacy, physicians from across the enterprise, the Clinical Resource Unit staff, Legal Department, Operations, and Quality. The Intracorp Guideline Quality Committee is similarly staffed by Senior and Associate Disability Medical Directors.

Revisions are suggested and considered. A vote is taken for acceptance or denial of the CRT.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

The guideline developers reviewed published cost-analyses.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

<u>Diagnostic Confirmation</u>

Subjective Findings

- Palpitations
- Presyncope
- Syncope
- Chest pain

- Shortness of breath
- Fatigue associated with exercise

Objective Findings

- Prior history of predisposing factors (i.e., myocardial infarction, cardiomyopathy, valvular heart disease, or recent surgery, rheumatic fever, alcohol/substance abuse, and diabetes)
- Marked postural changes and widened pulse pressure
- Apical pulse rate and rhythm disturbances
- Distended jugular veins
- Abnormal heart sounds (e.g., third beat, gallop, rub, thrills, clicks, or murmurs)
- Ankle edema or calf tenderness
- Atrial or ventricular conduction abnormalities as seen on electrocardiogram (ECG)

Diagnostic Tests

- Electrocardiogram (ECG) may show atrial or ventricular conduction abnormalities.
- Holter monitoring for a predetermined length of time (generally at least 24 hours) or in a controlled setting with a treadmill exercise test may reveal paroxysmal episodes of conduction abnormalities.
- In life-threatening situations (history of cardiac arrest) or arrhythmias refractory to treatment, electrophysiological studies can be performed to see if the arrhythmia can be induced via intracardiac stimulation and recording (see the Intracorp guideline Cardiac Electrophysiologic Studies).
- Laboratory studies (e.g., serum potassium, calcium, and magnesium levels; digoxin level to rule out toxicity; blood glucose for insulin reaction)

Differential Diagnosis

- Syncope
- Myocardial infarction (see the Intracorp guideline Myocardial Infarction)
- Angina (see the Intracorp guideline Angina Pectoris)
- Congestive heart failure (CHF) or ischemia
- Wolf-Parkinson-White syndrome
- "Sick Sinus" syndrome
- Diabetes
- Hyperthyroidism
- Drug side effect (e.g., theophylline, anticholinergics, or tricyclic antidepressants)
    - Over-the-counter decongestants or diet pills containing catecholamines or theophylline derivatives

Treatment Options

- Anti-arrhythmic agents to convert the patient to normal sinus rhythm or produce enough rate control for the patient to tolerate the arrhythmia
- Cardioversion with the use of intravenous conscious sedation to produce anesthesia
- Defibrillation is done in emergent situations for ventricular fibrillation.
- Radio frequency catheter ablation is sometimes indicated for definitive treatment to terminate ventricular tachycardia, but is only possible and effective for a limited number of arrhythmias.
- Implantable cardiac defibrillator for patients with history of cardiac arrest and who have confirmed ventricular tachycardia or ventricular fibrillation
- Permanent or temporary cardiac pacemakers are indicated for patients with symptomatic bradyarrhythmias and tachyarrhythmias and irreversible complete heart block (see the Intracorp guideline Pacemaker Insertion).

Duration of Medical Treatment

- Medical -
    - For most patients with underlying cardiac structural abnormalities (i.e., cardiomyopathy, prior myocardial infarction [MI], or valvular disease) treatment with an anti-arrhythmic agent will be lifelong.
    - For post-operative arrhythmias the duration of treatment is usually 1 to 3 months, as the arrhythmia will resolve once the patient heals from the surgery and the large fluid shifts resolve.
    - Treatment with a pacemaker or implantable cardiac defibrillator (ICD) is lifelong, and battery changes will be necessary every several years.

Additional provider information regarding primary care visit schedules, referral options, and frequency and duration of specialty care is provided in the original guideline document.

The original guideline document also provides a list of red flags that may affect disability duration and return to work goals, including

- Resolving ischemic symptoms
- Resolving CHF symptoms
- Resolving pacemaker function
- After hospitalization

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate diagnosis, treatment, and management of arrhythmia that assist medical management leaders in making appropriate benefit coverage determinations

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Arrhythmia. Philadelphia (PA): Intracorp; 2004. Various p.

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1997 (revised 2004)

GUIDELINE DEVELOPER(S)

Intracorp - Public For Profit Organization

SOURCE(S) OF FUNDING

Intracorp

GUIDELINE COMMITTEE

CIGNA Clinical Resources Unit (CRU)
Intracorp Disability Clinical Advisory Team (DCAT)
Medical Technology Assessment Committee (MTAC)
Intracorp Guideline Quality Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

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Reprints of complete guideline content may be purchased for $35.00 per title (plus tax in TX at 8.25% and CT at 1.0%). Please send e-mail request to lbowman@mail.intracorp.com.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Policies and procedures. Medical Technology Assessment Committee Review Process. Philadelphia (PA): Intracorp; 2004. 4 p.

Licensing information and pricing: Available from Intracorp, 1601 Chestnut Street, TL-09C, Philadelphia, PA 19192; e-mail: lbowman@mail.intracorp.com.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on November 23, 2004. The information was verified by the guideline developer on December 8, 2004.

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